

IN THE CLAIMS:WE CLAIM:

1. A flask for the growth of cells comprising:

5 a flask body serving as a cell culture chamber defined by a bottom tray having a rigid surface and a top plate, the bottom tray and top plate connected by side walls and end walls,  
at least one gas permeable insert located within the flask body defining a gas permeable opening through which gases from within the cell culture  
10 chamber communicate with gases outside the cell culture chamber, and  
at least one aperture in the flask body containing a leak proof septum.

2. The flask according to claim 1, wherein the gas permeable insert is a hydrophobic membrane.

15

3. The flask according to claim 1, wherein the aperture is a neck extending from the flask body.

20

4. The flask according to claim 3 further comprising a cap containing said septum in a top surface thereof and wherein cap is received capable of sealing the aperture neck.

25

5. The flask of according to claim 1 wherein the at least one aperture is located within the top plate.

6. The flask according to claim 1 wherein the at least one aperture is located within the side walls or end walls.

30

7. The flask according to claim 3 further comprising a vent integrally molded within the top surface, whereby the vent is capable of supporting the insert and whereby the insert covers the vent such that liquid may not escape the cell culture chamber through the vent.

8. The flask according to claim 1 wherein the flask body has a substantially rectangular footprint and a substantially uniform height.

5 9. The flask according to claim 8 wherein the dimensions of the substantially rectangular footprint and substantially uniform height are substantially identical to the industry standard footprint and height dimensions for microplates.

10 10. The flask according to claim 1 further comprising stand-offs either rising from an exterior surface of the top plate or descending from an exterior surface of the bottom tray.

15 11. The flask according to claim 1 wherein said aperture is located along one wall and an interior portion of an opposing wall is sloped in such a way that when the flask is situated with the aperture facing upwards, the lowest most point of the opposing sidewall is located in vertical alignment with the aperture.

20 12. The flask according to claim 4 wherein the flask has a height as measured by the distance between an outermost plane of the bottom tray and an outermost plane of the top plate, and wherein the cap has a diameter that does not exceed the height of the flask.

25 13. A flask for the growth of cells comprising:  
a flask body serving as a cell culture chamber defined by a bottom tray having a rigid surface and a top plate, the bottom tray and top plate connected by side walls and end walls,  
the flask body having a substantially rectangular footprint,  
a neck connected to and extending from the flask body, the neck having an opening providing access to the cell culture chamber,  
a cap for covering said neck opening,  
a cut-out region from said substantially rectangular footprint,  
30 whereby the neck and cap extend from the flask within the cut-out region such that the neck and cap remain within the substantially rectangular footprint.

14. The flask of claim 13 further comprising at least one gas permeable insert located within the flask body defining a gas permeable opening through which gases from within the cell culture chamber communicate with gases outside the cell culture chamber.

5

15. The flask of claim 14 wherein the insert is a hydrophobic membrane.

16. The flask of claim 13 further comprising a septum located within a top surface  
10 of the cap.

17. The flask according to claim 13 wherein the rectangular footprint has dimensions that are substantially identical to the industry standard footprint dimension for microplates.

15

18. The flask according to claim 13 further comprising stand-offs either rising from an exterior surface of the top plate or descending from an exterior surface of the bottom tray.

20

19. The flask according to claim 13 wherein the flask has a height as measured by the distance between an outermost plane of the bottom tray and an outermost plane of the top plate, and wherein the cap has a diameter that does not exceed the height of the flask.

25

20. The flask according to claim 13 wherein said neck is located along one wall and an interior portion of an opposing wall is sloped in such a way that when the flask is situated with the neck facing upwards, the lowest most point of the opposing sidewall is located in vertical alignment with the neck.

30

21. The flask according to claim 14 further comprising a vent integrally molded within the top surface, whereby the vent is capable of supporting the insert and whereby the insert covers the vent such that liquid may not escape the cell culture chamber through the vent.